



DEPARTMENT OF ENERGY

**Office of River Protection**

HANFORD SITE

June 7, 2012

***Agency Update to  
Hanford Advisory Board***

Tom Fletcher  
Tank Farms Project Assistant Manager



## ORP Activities

Safety Culture

Tank Retrievals

One-System

Waste Management  
and Tank Closure  
Environmental  
Impact Statement

Large Scale Integrated  
Testing



*Workers lower an Off-Riser  
Sampler into tank C-109*



**BEFORE –**  
*TBX-1 terminal box during initial demolition*



**AFTER –** *Wires neatly grouped just beneath the  
yet-to-be-installed new terminal box.*





## C-Farm Status

**C-112**

Bulk retrieval completed in April

**C-108**

Retrieval efforts complete

- C-107** Using the Mobile Arm Retrieval System – Bulk retrieval began in October 2011. Completion is expected in the [Summer of 2012](#).
- C-111** Conducting a remote evaluation of the hard heel materials with a Raman Spectrometer. Operations expected to resume mid 2012.
- C-109** Hard heel removal start in Spring of 2012. Completion planned for [Fall of 2012](#).
- C-110** Engineering support and installation of fold track to aid in Hard Heel Removal in 2013.
- C-104** Hard Heel removal – caustic dissolution begins in June 2012
- C-105** Preparations are underway or installation of the vacuum version of the Mobile Arm Retrieval System. System currently under development.
- C-101 and C-102** Infrastructure continues with installation of Enhanced Reach Sluicer Systems. Installation expected in Summer of 2012 with retrieval in early FY13.



## **C-112 Bulk Retrieval Complete**



*C-112 before sluicing operations began  
(December 2011)*



*C-112 on April 18 after operations were completed*





# Waste Treatment Plant is 64% Complete

Pretreatment  
Facility

Analytical  
Laboratory

Low-Activity  
Waste Facility

High-Level  
Waste

## Facility Complete

Low-Activity Waste Facility	68%
Analytical Laboratory	52%
Balance of Facilities	49%
High-Level Waste Facility	59%
Pretreatment Facility	53%





## **WTP Recent Accomplishments**

### **Pretreatment Facility**

- Action plan completed for resolution of corrosion/erosion issues

### **Low Activity Waste**

- Three six-ton exhausters installed
- Installation of liquid feed process vessel began
- Preparing melter for refractor installation

### **High Level Waste**

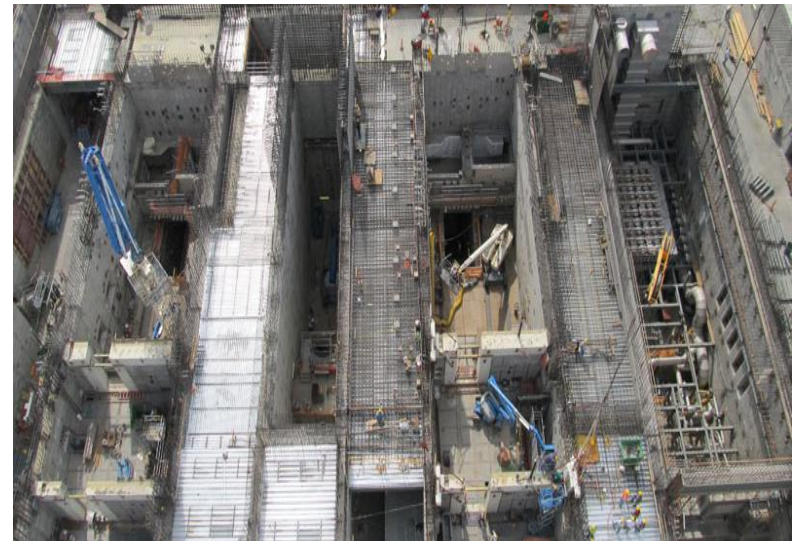
- 102 ton-shield door received
- Melter #2 wall placement completed
- Plant wash vessel received

### **Balance of Facilities**

- Began erecting structural steel for Anhydrous Ammonia Facility



*Glass former silos*

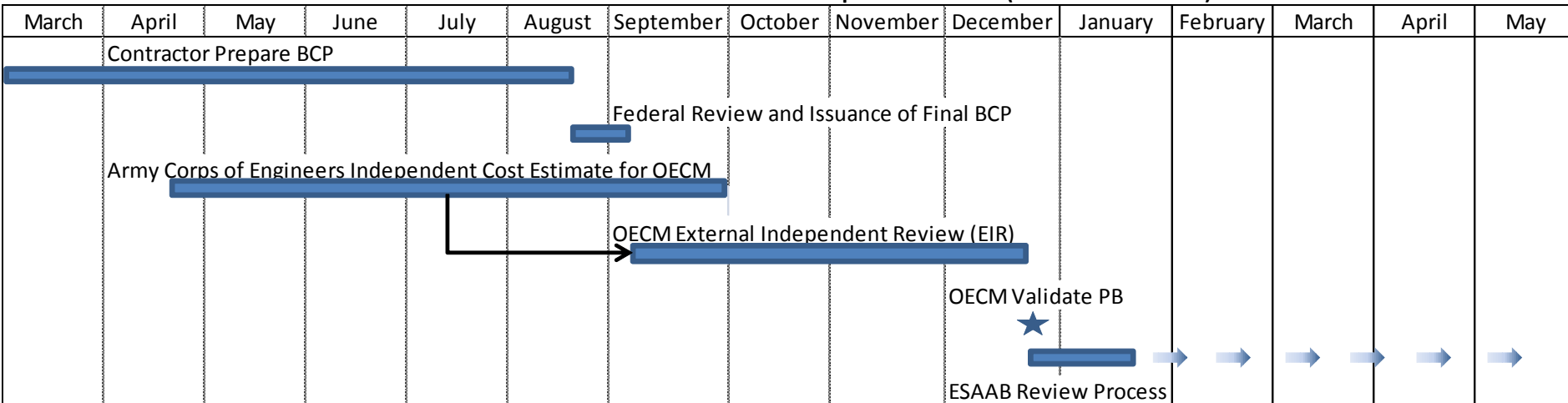


*High-Level Waste Facility melter bay*

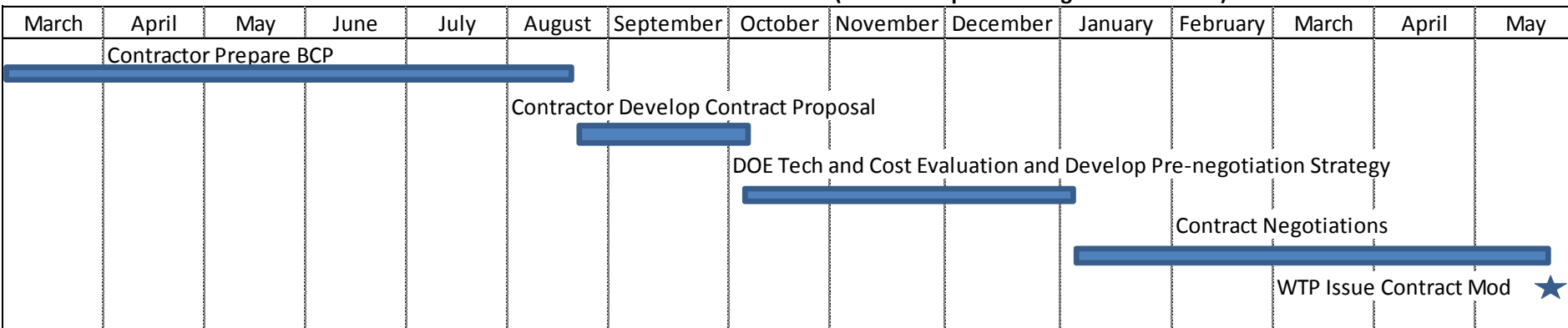


## WTP Rebaseline

**Best Case Notional Performance Baseline Development Schedule (DOE-413.3B Process)**



**Best Case Notional Contract Modification Process (Federal Acquisition Regulation Process)**





## ***ORP Safety***

- DNFSB receives ORP Safety Culture Improvement Plan
  - Action 1-8 of DNFSB Implementation Plan for 2011-1
  - Effectively managing change
    - Management focus
    - Safety Culture Integrated Project Team
- Safety Conscious Work Environment
  - Training
  - Site-wide survey
- Employee Concerns Program Assist Visit
- Encouraging a vigorous questioning attitude
  - Safety Culture website
  - Zero threshold issue resolution system

### Safety Statistics

BNI recently surpassed 11 million hours without a lost time work injury

WRPS 3 million hours without a lost time work injury – Company-wide Safety Culture Survey completed





Department of Energy  
Office of River Protection

Connect with

# The River Protection Project

*news, photos, podcasts, press releases, and more...*



Facebook

[facebook.com/riverprotection](https://facebook.com/riverprotection)



Twitter

[twitter.com/riverprotection](https://twitter.com/riverprotection)



Flickr

[flickr.com/riverprotection](https://flickr.com/riverprotection)



Podcasts

[youtube.com/ORPHanford](https://youtube.com/ORPHanford)



Newsletter

***Please Contact Erik Olds ([Theodore E Olds@orp.doe.gov](mailto:Theodore_E_Olds@orp.doe.gov)) or 509-372-8656) to be added to the newsletter distribution list***

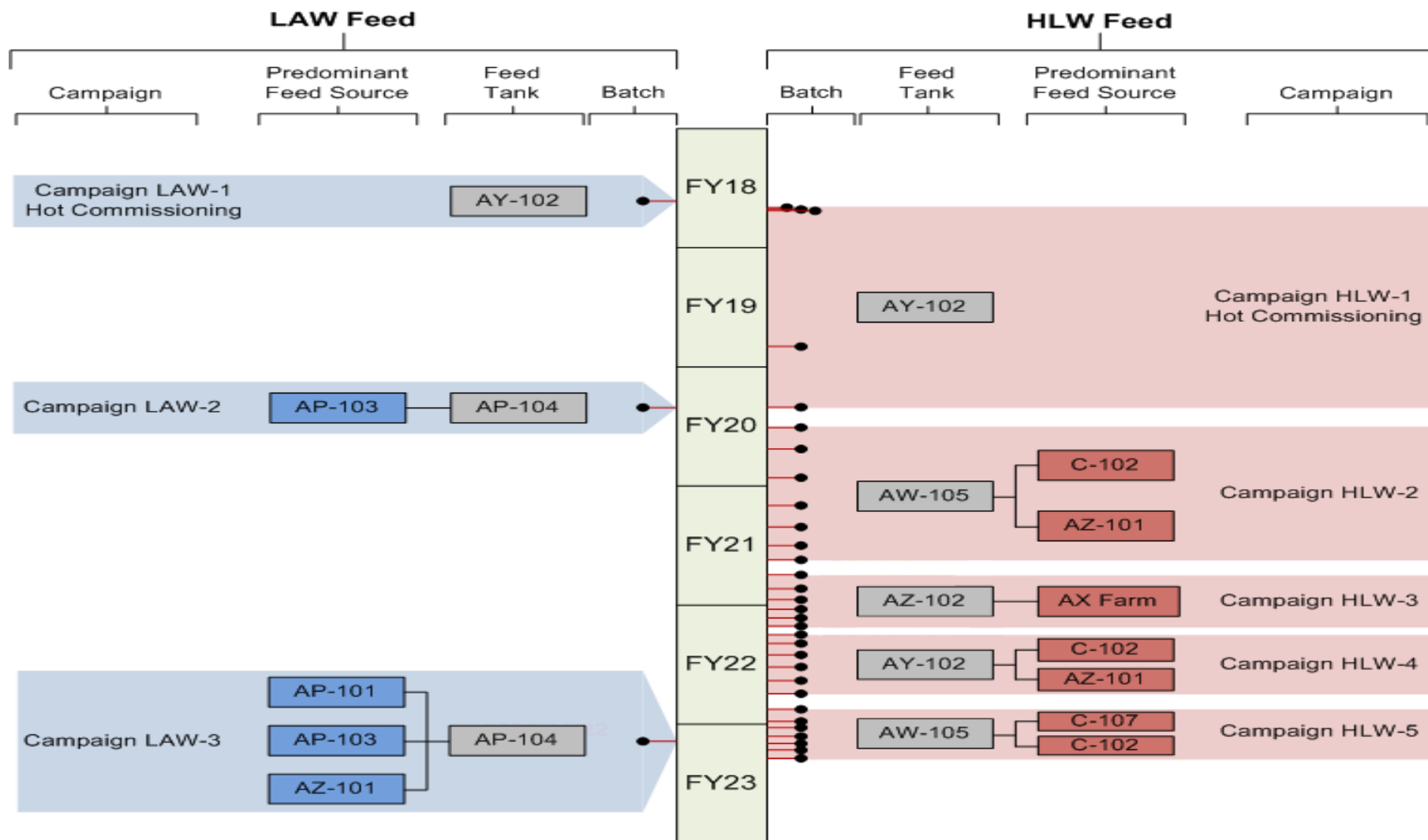


BACK UP SLIDES



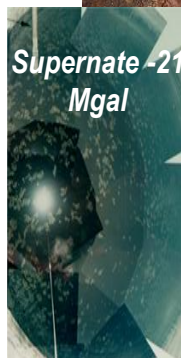
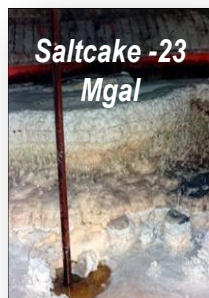


## Initial Waste Feed Delivery Schedule

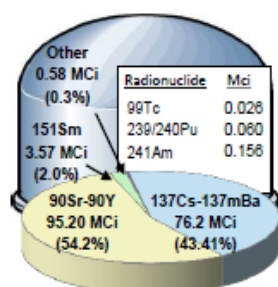




# Waste Composition

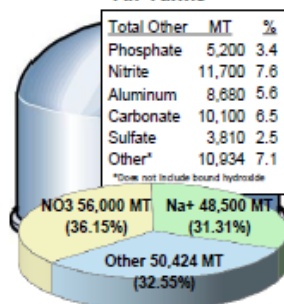


Radionuclide Inventory  
Decayed to January 1,  
2008 All Tanks



Total in All Tanks  
175.55 MCi

Chemical Inventory  
All Tanks



Total in All Tanks  
154,282 Metric Tons

## Hanford Tank Waste

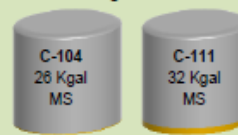
SST WR Next in Line



SST WR Complete to Limits of Tech



WR in Progress



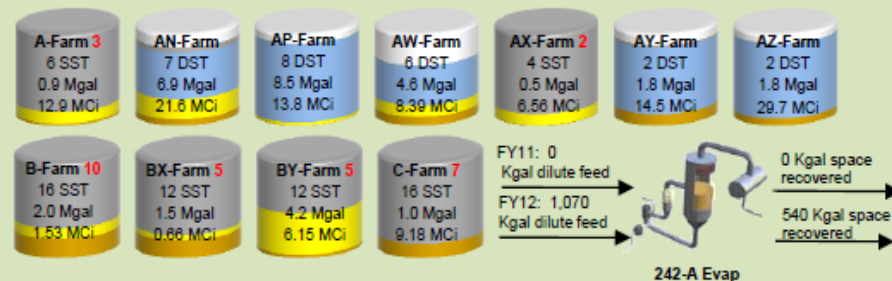
SST WR Complete

C-106: Dec 2003  
C-203: Mar 2005  
C-202: Aug 2005  
C-201: Mar 2006  
C-103: Aug 2006  
C-204: Dec 2006  
S-112: Mar 2007

200 West Area Farms



200 East Area Farms



Ref: Tank Inventories and Status per HNF-EP-0182, Rev. 280, "Waste Tank Summary Report for Month Ending July, 31, 2011."  
Activity and Chemical inventory per TWINS Best Basis Summary Sept. 23, 2011 Activity decayed to January 1, 2008

### Legend:

MARS – Mobile  
Arm Retrieval  
System

MS – Modified  
Sluicing

Name #  
# of tanks  
Waste in farm  
Activity in farm

# number of  
known or  
suspected  
leakers

available  
space

restricted  
space

supernate

saltcake

sludge





# Opportunity 1: Early LAW Glass

